

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.**

Application Serial Number: 10/560,726

Source: IFWP

Date Processed by STIC: 4-14-06

***ENTERED***



IFWP

## RAW SEQUENCE LISTING

DATE: 04/14/2006

PATENT APPLICATION: US/10/560,726

TIME: 10:45:46

Input Set : A:\21788wo.ST25.txt

Output Set: N:\CRF4\04142006\J560726.raw

3 <110> APPLICANT: DSM IP Assets B.V.  
 5 <120> TITLE OF INVENTION: Feedback-resistant mevalonate kinases  
 7 <130> FILE REFERENCE: Case 21788  
 C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/560,726  
 C--> 9 <141> CURRENT FILING DATE: 2005-12-08  
 9 <150> PRIOR APPLICATION NUMBER: EP 03012294.9  
 10 <151> PRIOR FILING DATE: 2003-06-12  
 12 <160> NUMBER OF SEQ ID NOS: 33  
 14 <170> SOFTWARE: PatentIn version 3.2  
 16 <210> SEQ ID NO: 1  
 17 <211> LENGTH: 378  
 18 <212> TYPE: PRT  
 19 <213> ORGANISM: Paracoccus zeaxanthinifaciens  
 21 <400> SEQUENCE: 1  
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 24 1 5 10 15  
 27 Ile Leu Ser Gly Glu His Ser Val Leu Tyr Gly Ala Pro Ala Leu Ala  
 28 20 25 30  
 31 Met Ala Ile Ala Arg Tyr Thr Glu Val Trp Phe Thr Pro Leu Gly Ile  
 32 35 40 45  
 35 Gly Glu Gly Ile Arg Thr Thr Phe Ala Asn Leu Ser Gly Gly Ala Thr  
 36 50 55 60  
 39 Tyr Ser Leu Lys Leu Leu Ser Gly Phe Lys Ser Arg Leu Asp Arg Arg  
 40 65 70 75 80  
 43 Phe Glu Gln Phe Leu Asn Gly Asp Leu Lys Val His Lys Val Leu Thr  
 44 85 90 95  
 47 His Pro Asp Asp Leu Ala Val Tyr Ala Leu Ala Ser Leu Leu His Asp  
 48 100 105 110  
 51 Lys Pro Pro Gly Thr Ala Ala Met Pro Gly Ile Gly Ala Met His His  
 52 115 120 125  
 55 Leu Pro Arg Pro Gly Glu Leu Gly Ser Arg Thr Glu Leu Pro Ile Gly  
 56 130 135 140  
 59 Ala Gly Met Gly Ser Ser Ala Ala Ile Val Ala Ala Thr Thr Val Leu  
 60 145 150 155 160  
 63 Phe Glu Thr Leu Leu Asp Arg Pro Lys Thr Pro Glu Gln Arg Phe Asp  
 64 165 170 175  
 67 Arg Val Arg Phe Cys Glu Arg Leu Lys His Gly Lys Ala Gly Pro Ile  
 68 180 185 190  
 71 Asp Ala Ala Ser Val Val Arg Gly Gly Leu Val Arg Val Gly Gly Asn  
 72 195 200 205  
 75 Gly Pro Gly Ser Ile Ser Ser Phe Asp Leu Pro Glu Asp His Asp Leu  
 76 210 215 220  
 79 Val Ala Gly Arg Gly Trp Tyr Trp Val Leu His Gly Arg Pro Val Ser

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80 225          230          235          240
83 Gly Thr Gly Glu Cys Val Ser Ala Val Ala Ala Ala His Gly Arg Asp
84          245          250          255
87 Ala Ala Leu Trp Asp Ala Phe Ala Val Cys Thr Arg Ala Leu Glu Ala
88          260          265          270
91 Ala Leu Leu Ser Gly Gly Ser Pro Asp Ala Ala Ile Thr Glu Asn Gln
92          275          280          285
95 Arg Leu Leu Glu Arg Ile Gly Val Val Pro Ala Ala Thr Gln Ala Leu
96          290          295          300
99 Val Ala Gln Ile Glu Glu Ala Gly Gly Ala Ala Lys Ile Cys Gly Ala
100 305          310          315          320
103 Gly Ser Val Arg Gly Asp His Gly Gly Ala Val Leu Val Arg Ile Asp
104          325          330          335
107 Asp Ala Gln Ala Met Ala Ser Val Met Ala Arg His Pro Asp Leu Asp
108          340          345          350
111 Trp Ala Pro Leu Arg Met Ser Arg Thr Gly Ala Ala Pro Gly Pro Ala
112          355          360          365
115 Pro Arg Ala Gln Pro Leu Pro Gly Gln Gly
116          370          375
119 <210> SEQ ID NO: 2
120 <211> LENGTH: 396
121 <212> TYPE: PRT
122 <213> ORGANISM: homo sapiens
124 <400> SEQUENCE: 2
126 Met Leu Ser Glu Val Leu Leu Val Ser Ala Pro Gly Lys Val Ile Leu
127 1          5          10          15
130 His Gly Glu His Ala Val Val His Gly Lys Val Ala Leu Ala Val Ser
131          20          25          30
134 Leu Asn Leu Arg Thr Phe Leu Arg Leu Gln Pro His Ser Asn Gly Lys
135          35          40          45
138 Val Asp Leu Ser Leu Pro Asn Ile Gly Ile Lys Arg Ala Trp Asp Val
139          50          55          60
142 Ala Arg Leu Gln Ser Leu Asp Thr Ser Phe Leu Glu Gln Gly Asp Val
143 65          70          75          80
146 Thr Thr Pro Thr Ser Glu Gln Val Glu Lys Leu Lys Glu Val Ala Gly
147          85          90          95
150 Leu Pro Asp Asp Cys Ala Val Thr Glu Arg Leu Ala Val Leu Ala Phe
151          100          105          110
154 Leu Tyr Leu Tyr Leu Ser Ile Cys Arg Lys Gln Arg Ala Leu Pro Ser
155          115          120          125
158 Leu Asp Ile Val Val Trp Ser Glu Leu Pro Pro Gly Ala Gly Leu Gly
159          130          135          140
162 Ser Ser Ala Ala Tyr Ser Val Cys Leu Ala Ala Ala Leu Leu Thr Val
163 145          150          155          160
166 Cys Glu Glu Ile Pro Asn Pro Leu Lys Asp Gly Asp Cys Val Asn Arg
167          165          170          175
170 Trp Thr Lys Glu Asp Leu Glu Leu Ile Asn Lys Trp Ala Phe Gln Gly
171          180          185          190
174 Glu Arg Met Ile His Gly Asn Pro Ser Gly Val Asp Asn Ala Val Ser

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175          195          200          205
178 Thr Trp Gly Gly Ala Leu Arg Tyr His Gln Gly Lys Ile Ser Ser Leu
179          210          215          220
182 Lys Arg Ser Pro Ala Leu Gln Ile Leu Leu Thr Asn Thr Lys Val Pro
183 225          230          235          240
186 Arg Asn Thr Arg Ala Leu Val Ala Gly Val Arg Asn Arg Leu Leu Lys
187          245          250          255
190 Phe Pro Glu Ile Val Ala Pro Leu Leu Thr Ser Ile Asp Ala Ile Ser
191          260          265          270
194 Leu Glu Cys Glu Arg Val Leu Gly Glu Met Gly Glu Ala Pro Ala Pro
195          275          280          285
198 Glu Gln Tyr Leu Val Leu Glu Glu Leu Ile Asp Met Asn Gln His His
199          290          295          300
202 Leu Asn Ala Leu Gly Val Gly His Ala Ser Leu Asp Gln Leu Cys Gln
203 305          310          315          320
206 Val Thr Arg Ala Arg Gly Leu His Ser Lys Leu Thr Gly Ala Gly Gly
207          325          330          335
210 Gly Gly Cys Gly Ile Thr Leu Leu Lys Pro Gly Leu Glu Gln Pro Glu
211          340          345          350
214 Val Glu Ala Thr Lys Gln Ala Leu Thr Ser Cys Gly Phe Asp Cys Leu
215          355          360          365
218 Glu Thr Ser Ile Gly Ala Pro Gly Val Ser Ile His Ser Ala Thr Ser
219          370          375          380
222 Leu Asp Ser Arg Val Gln Gln Ala Leu Asp Gly Leu
223 385          390          395
226 <210> SEQ ID NO: 3
227 <211> LENGTH: 395
228 <212> TYPE: PRT
229 <213> ORGANISM: mouse
231 <400> SEQUENCE: 3
233 Met Leu Ser Glu Ala Leu Leu Val Ser Ala Pro Gly Lys Val Ile Leu
234 1          5          10          15
237 His Gly Glu His Ala Val Val His Gly Lys Val Ala Leu Ala Ala Ala
238          20          25          30
241 Leu Asn Leu Arg Thr Phe Leu Leu Leu Arg Pro Gln Ser Asn Gly Lys
242          35          40          45
245 Val Ser Val Asn Leu Pro Asn Ile Gly Ile Lys Gln Val Trp Asp Val
246          50          55          60
249 Gly Met Leu Gln Arg Leu Asp Thr Ser Phe Leu Glu Gln Gly Asp Val
250 65          70          75          80
253 Ser Val Pro Thr Leu Glu Gln Leu Glu Lys Leu Lys Lys Met Gly Asp
254          85          90          95
257 Leu Pro Arg Asp Arg Ala Gly Asn Glu Gly Met Ala Leu Leu Ala Phe
258          100          105          110
261 Leu Tyr Leu Tyr Leu Ala Ile Cys Arg Lys Gln Arg Thr Leu Pro Ser
262          115          120          125
265 Leu Asp Met Val Val Trp Ser Glu Leu Pro Pro Gly Ala Gly Leu Gly
266          130          135          140
269 Ser Ser Ala Ala Tyr Ser Val Cys Leu Ala Ala Ala Leu Leu Thr Ala

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270 145          150          155          160
273 Cys Glu Glu Val Ser Asn Pro Leu Lys Asp Gly Val Ser Val Ser Arg
274          165          170          175
277 Trp Pro Glu Glu Asp Leu Lys Ser Ile Asn Lys Trp Ala Phe Glu Gly
278          180          185          190
281 Glu Arg Val Ile His Gly Asn Pro Ser Gly Val Asp Asn Ala Val Ser
282          195          200          205
285 Thr Trp Gly Gly Ala Leu Arg Phe Gln Gln Gly Thr Met Ser Ser Leu
286          210          215          220
289 Lys Ser Leu Pro Ser Leu Gln Ile Leu Leu Thr Asn Thr Lys Val Pro
290 225          230          235          240
293 Arg Ser Thr Lys Ala Leu Val Ala Ala Val Arg Ser Arg Leu Thr Lys
294          245          250          255
297 Phe Pro Glu Ile Val Ala Pro Leu Leu Thr Ser Ile Asp Ala Ile Ser
298          260          265          270
301 Leu Glu Cys Glu Arg Val Leu Gly Glu Met Val Ala Ala Pro Val Pro
302          275          280          285
305 Glu Gln Tyr Leu Val Leu Glu Glu Leu Ile Asp Met Asn Gln His His
306          290          295          300
309 Leu Asn Ala Leu Gly Val Gly His Asn Ser Leu Asp Gln Leu Cys Gln
310 305          310          315          320
313 Val Thr Ala Ala His Gly Leu His Ser Lys Leu Thr Gly Ala Gly Gly
314          325          330          335
317 Gly Gly Cys Gly Ile Thr Leu Leu Lys Pro Gly Leu Glu Gln Ala Thr
318          340          345          350
321 Val Glu Ala Ala Lys Gln Ala Leu Thr Ser Cys Gly Phe Asp Cys Trp
322          355          360          365
325 Glu Thr Ser Ile Gly Ala Pro Gly Val Ser Thr His Ser Ala Ala Ala
326          370          375          380
329 Val Gly Asp Pro Val Arg Gln Ala Leu Gly Leu
330 385          390          395
333 <210> SEQ ID NO: 4
334 <211> LENGTH: 395
335 <212> TYPE: PRT
336 <213> ORGANISM: rat
338 <400> SEQUENCE: 4
340 Met Leu Ser Glu Val Leu Leu Val Ser Ala Pro Gly Lys Val Ile Leu
341 1          5          10          15
344 His Gly Glu His Ala Val Val His Gly Lys Val Ala Leu Ala Val Ala
345          20          25          30
348 Leu Asn Leu Arg Thr Phe Leu Val Leu Arg Pro Gln Ser Asn Gly Lys
349          35          40          45
352 Val Ser Leu Asn Leu Pro Asn Val Gly Ile Lys Gln Val Trp Asp Val
353          50          55          60
356 Ala Thr Leu Gln Leu Leu Asp Thr Gly Phe Leu Glu Gln Gly Asp Val
357 65          70          75          80
360 Pro Ala Pro Thr Leu Glu Gln Leu Glu Lys Leu Lys Lys Val Ala Gly
361          85          90          95
364 Leu Pro Arg Asp Cys Val Gly Asn Glu Gly Leu Ser Leu Leu Ala Phe

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Input Set : A:\21788wo.ST25.txt

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```

365          100          105          110
368 Leu Tyr Leu Tyr Leu Ala Ile Cys Arg Lys Gln Arg Thr Leu Pro Ser
369          115          120          125
372 Leu Asp Ile Met Val Trp Ser Glu Leu Pro Pro Gly Ala Gly Leu Gly
373          130          135          140
376 Ser Ser Ala Ala Tyr Ser Val Cys Val Ala Ala Ala Leu Leu Thr Ala
377 145          150          155          160
380 Cys Glu Glu Val Thr Asn Pro Leu Lys Asp Arg Gly Ser Ile Gly Ser
381          165          170          175
384 Trp Pro Glu Glu Asp Leu Lys Ser Ile Asn Lys Trp Ala Tyr Glu Gly
385          180          185          190
388 Glu Arg Val Ile His Gly Asn Pro Ser Gly Val Asp Asn Ser Val Ser
389          195          200          205
392 Thr Trp Gly Gly Ala Leu Arg Tyr Gln Gln Gly Lys Met Ser Ser Leu
393          210          215          220
396 Lys Arg Leu Pro Ala Leu Gln Ile Leu Leu Thr Asn Thr Lys Val Pro
397 225          230          235          240
400 Arg Ser Thr Lys Ala Leu Val Ala Gly Val Arg Ser Arg Leu Ile Lys
401          245          250          255
404 Phe Pro Glu Ile Met Ala Pro Leu Leu Thr Ser Ile Asp Ala Ile Ser
405          260          265          270
408 Leu Glu Cys Glu Arg Val Leu Gly Glu Met Ala Ala Ala Pro Val Pro
409          275          280          285
412 Glu Gln Tyr Leu Val Leu Glu Glu Leu Met Asp Met Asn Gln His His
413          290          295          300
416 Leu Asn Ala Leu Gly Val Gly His Ala Ser Leu Asp Gln Leu Cys Gln
417 305          310          315          320
420 Val Thr Ala Ala His Gly Leu His Ser Lys Leu Thr Gly Ala Gly Gly
421          325          330          335
424 Gly Gly Cys Gly Ile Thr Leu Leu Lys Pro Gly Leu Glu Arg Ala Lys
425          340          345          350
428 Val Glu Ala Ala Lys Gln Ala Leu Thr Gly Cys Gly Phe Asp Cys Trp
429          355          360          365
432 Glu Thr Ser Ile Gly Ala Pro Gly Val Ser Met His Ser Ala Thr Ser
433          370          375          380
436 Ile Glu Asp Pro Val Arg Gln Ala Leu Gly Leu
437 385          390          395
440 <210> SEQ ID NO: 5
441 <211> LENGTH: 378
442 <212> TYPE: PRT
443 <213> ORGANISM: Arabidopsis thaliana
445 <400> SEQUENCE: 5
447 Met Glu Val Lys Ala Arg Ala Pro Gly Lys Ile Ile Leu Ala Gly Glu
448 1          5          10          15
451 His Ala Val Val His Gly Ser Thr Ala Val Ala Ala Ala Ile Asp Leu
452          20          25          30
455 Tyr Thr Tyr Val Thr Leu Arg Phe Pro Leu Pro Ser Ala Glu Asn Asn
456          35          40          45
459 Asp Arg Leu Thr Leu Gln Leu Lys Asp Ile Ser Leu Glu Phe Ser Trp

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VERIFICATION SUMMARY

DATE: 04/14/2006

PATENT APPLICATION: US/10/560,726

TIME: 10:45:47

Input Set : A:\21788wo.ST25.txt

Output Set: N:\CRF4\04142006\J560726.raw

L:9 M:270 C: Current Application Number differs, Replaced Current Application No

L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date